

REMARKS

In the above-referenced Office Action the Examiner objected to the drawings under 37 CFR 1.83(a). In support of this objection the Examiner stated, "The drawings must show every feature of the invention specified in the claims. Therefore, the check valve and reset spool (claim 16) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance." Enclosed with this amendment is a new Figure 6 for the Examiner's approval.

Next, the Examiner rejected claims 1-6, 10, and 12-15 under 35 U.S.C. 102(b) as being anticipated by Forster. In support of this rejection the Examiner stated. "Forster discloses a device for securing a sealing member in a predetermined position comprising a positioning element 40 and a retaining element 42. The retaining element 42 is integrally formed on a first surface of the positioning element (e.g. see Fig. 6). The retaining element has a bevel with a first end and second end. The retaining and positioning elements have equal inside diameters. The outside diameter (or the first end of the bevel) of the retaining element is smaller than the positioning element's and

a radius is disposed tangent to the first end of the bevel and first surface. Forster discloses two positioning elements and two retaining elements (see Figs. 6, 8, and 10). A spacer means 44 or 49 is provided between the two positioning and retaining elements. The spacer has a plurality (four) posts. The spacer, positioning elements, and retaining elements can be formed integrally as a single piece 51 (see Fig. 8). This unit would also comprising four posts separated by fluid ports 52 (similar to posts 44 and ports 47 in Fig. 6)."

Claim 1 has been amended to include the limitation of, "...formed as an annulus of a predetermined size and shape disposed on at least one of said first surface and said second surface of said positioning element; said annulus having an inner diameter identical to an inner diameter of said positioning element, a bevel having a first end and a second end formed on an outer edge of said annulus [retaining member] such that said at least one of first surface and said second surface and said bevel form a ledge;...". Clearly the retaining element of Forster does not form a ledge based on a surface of the retaining member and a beveled portion an annulus.

Claim 10, another independent claim in the application, has been amended to specifically recite, "... formed as two annuluses of a predetermined size and shape disposed on said first outer surface of said positioning elements; each of said

annuluses having an inner diameter identical to an inner diameter of said positioning elements, ...a bevel having a first end and a second end formed on an outer edge of each of said annuluses such that said first surface and said bevel form a ledge; ...". Additionally, as stated above, Forster does not teach or suggest that the retaining element would form a ledge based on a surface of the retaining member or a beveled portion of an annulus.

Because claims 2-6 and 12-15 find their dependency back to Independent Claims 1 and 10 respectively, they are also believed allowable. Accordingly, the Examiner is respectfully requested to withdraw his rejection of claims 1-6, 10, and 12-15 under 35 U.S.C. 102(b) as being anticipated by Forster.

Finally, the Examiner rejected claims 16-20 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Forster.

In support of this rejection the Examiner stated, "Claims 16-21 are considered Jepson claims because of the phrase "the improvement comprising." Therefore, everything before that phrase is considered admitted prior art. Thus, Applicant has disclosed a known combination of a plurality of spool valve shells with a pressure release valve having a high pressure port, low pressure port, spool valve, check valve, and a reset spool. Applicant has not disclosed spool valve shells comprising

two positioning element, two retaining elements, a spacer means, and a sealing member. Forster teaches spool valve shells for use with valves, spool and ports. Forster teaches a sealing member (o-ring) 30 disposed between two opposing positioning elements 40 of two adjacent valve shells 23. Each shell has two positioning elements, two retaining elements 42 and a spacer means 44 (or 49). The retaining and positioning elements have equal inside diameters. The outside diameter of the retaining element is smaller than the positioning element's. Forster teaches that the shells effectively space and fix each sealing element while eliminating wear between the valve member and shell. Forster teaches that the retaining elements on the positioning elements serve to limit lateral movement of the sealing member and to maintain a relatively fixed friction between the spool and seal while preventing the seal from lifting off the spool or distorting. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the shells disclosed by the applicant with the shells taught by Forster to provide reduced wear, limited lateral movement of the seals, and effective sealing engagement of the seals even at high pressure. "

Claim 16, the only other independent claim in the application, has been amended to specifically recite, "...formed as annuluses of a predetermined size and shape disposed on said

first surface of each of said two retaining elements of said positioning elements, each of said annuluses having an inner diameter identical to an inner diameter of said positioning element; at least one of said first surface and said second surface of said positioning element;

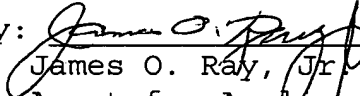
(c) a bevel having a first end and a second end formed on an outer edge of each of said annuluses such that said at least one of first surface and said second surface and said bevel form a ledge;

(d) a radius disposed tangent to said at least one of said first surface and said second surface of said positioning element and said first end of said bevel formed on said outer edge of said retaining member;..."

As discussed supra with respect to claims 1 and 10 clearly these limitations are neither taught nor made obvious by the cited reference in combination with applicants a ledge admitted prior art. Because claims 17-21 find their dependency back to amended claim 16 they are also believed allowable. Therefore, the Examiner is respectfully request to withdraw his rejection claims 16-21 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Forster.

In the event the Examiner has further difficulties with the allowance of the application, he is invited to contact the undersigned attorney by telephone at (412) 380-0725 to resolve any remaining questions or issues by interview and/or by Examiner's amendment as to any matter that will expedite the completion of the prosecution of the application.

Respectfully submitted,

By: 
James O. Ray, Jr.
Agent for Applicant
Registration No. 27,666

JAMES RAY & ASSOCIATES
2640 PITCAIRN ROAD
MONROEVILLE, PA 15146

TELEPHONE: 412-380-0725
FACSIMILE: 412-380-0748

APPENDIX A

1. (Amended) A device for securing a sealing member in a predetermined position, said device comprising:

(a) a positioning element of a predetermined size and shape having a first surface and a second surface;

(b) a retaining element formed as an annulus of a predetermined size and shape disposed on at least one of said first surface and said second surface of said positioning element; said annulus having an inner diameter identical to an inner diameter of said positioning element, [and]

(c) a bevel having a first end and a second end formed on an outer edge of said annulus [retaining member] such that said at least one of first surface and said second surface and said bevel form a ledge; and

(d) a radius disposed tangent to said at least one of said first surface and said second surface of said positioning element and said first end of said bevel formed on said outer edge of said retaining member.

10. (Twice Amended) A device for securing a plurality of sealing members in a predetermined position, said device comprising:

(a) two positioning elements of a predetermined size and shape, each of said two positioning elements having a first outer surface and a second radially opposed inner surface;

(b) two retaining elements formed as two annuluses of a predetermined size and shape disposed on said first outer surface of said positioning elements; each of said annuluses having an inner diameter identical to an inner diameter of said positioning elements, [and]

(c) a bevel having a first end and a second end formed on an outer edge of each of said annuluses such that said first surface and said bevel form a ledge; and

[(c)] (d) a spacer means of a predetermined size and shape engageable with each of said radially opposed inner surface of said two positioning elements for locating said two positioning elements a predetermined distance from each other, said two positioning elements and said two retaining elements and said spacer means being formed integrally as a single piece.

16. (Amended) In combination with a pressure release valve having a high pressure port, a low pressure port, a spool valve, check valve, and a reset spool, said spool valve, check valve, and reset spool further having a plurality of spool valve shells, the improvement comprising:

(a) such spool valve shell having two positioning elements of a predetermined size and shape;

(b) two retaining elements formed as annuluses of a predetermined size and shape disposed on said first surface of each of said two retaining elements of said positioning elements, each of said annuluses having an inner diameter identical to an inner diameter of said positioning element; at least one of said first surface and said second surface of said positioning element;

(c) a bevel having a first end and a second end formed on an outer edge of each of said annuluses such that said at least one of first surface and said second surface and said bevel form a ledge;

(d) a radius disposed tangent to said at least one of said first surface and said second surface of said positioning element and said first end of said bevel formed on said outer edge of said retaining member;

[(c)] (e) a spacer means of a predetermined size and shape for locating said positioning elements a predetermined distance from each other; and

[(d)] (f) a sealing member of a predetermined size and shape disposed intermediate two opposing said positioning elements of two such adjacent spool valve shells, whereby said retaining elements on opposing said positioning elements secure

said sealing member in position when such pressure release valve is actuated.